

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of manufacturing method of a piezoelectric/electrostrictive film type device including comprising a ceramic substrate of a ceramic, and a piezoelectric/electrostrictive operation portion containing formed on said ceramic substrate, said piezoelectric/electrostrictive operation portion including a lower electrode, a piezoelectric/electrostrictive layer, and a an upper electrode being formed on said substrate, wherein the said piezoelectric/electrostrictive layer is formed to extend beyond ends of at least one of the said electrodes, thereby the so that ends of the a projected portion of said piezoelectric/electrostrictive layer is projected, wherein project beyond said ends of said at least one electrode, said method comprises comprising the steps of:

forming the said piezoelectric/electrostrictive layer of the said piezoelectric/electrostrictive operation portion in a range broader than so that of at least one of electrodes to project ends of the said projected portion of said piezoelectric/electrostrictive layer project beyond ends of at least one of said electrodes;

coating preparing a coating liquid prepared by admixing a polymerizable oligomer and inorganic particles in a dispersing medium in an a sufficient amount sufficient to make the allow said coating liquid to permeate through a gap between at least a said projecting portion of the said piezoelectric/electrostrictive layer and the said ceramic substrate and;

applying said coating liquid to coat a one or more predetermined portion, discrete application portions of said at least one of electrodes-electrode; and

drying the said coating liquid to form a coupling member to couple which couples said ends of a said projected portion of the said piezoelectric/ electrostrictive layer to the said ceramic substrate.

2. (Currently Amended) The method of manufacturing method of the piezoelectric/electrostrictive film type device according to claim 1, ~~comprising the steps of:~~ wherein said applying step comprises applying the said coating liquid to said one or more discrete application portions of said at least one electrode using a coating apparatus comprising:

_____ pressurizing supply means for pressurizing/supplying the said coating liquid;

_____ switching means which is disposed in a supply path of the said pressurizing supply means to switch the a supply of the said coating liquid; and

_____ a discharge head for discharging the said coating liquid introduced from the said supply path of the said pressurizing supply means to the outside, the said discharge head comprising:

_____ a discharge head substrate including a coating liquid introduction path connected to the said supply path of the said pressurizing supply means,

_____ a pressurizing chamber in which the said coating liquid introduction path opens, and

_____ one or more coating liquid discharge paths connected to the said pressurizing chamber and opened to the outside; and

_____ a piezoelectric/electrostrictive operation portion disposed in a position opposite to the opposing said pressurizing chamber on the said discharge head substrate;

_____ wherein at an open time of the switching means, the said coating liquid introduced into the said pressurizing chamber is continuously discharged in an atomized droplet state by a flexural displacement of the said piezoelectric/electrostrictive operation portion when said switching means is open.

3. (Currently Amended) The method of manufacturing method of the piezoelectric/electrostrictive film type device according to claim 1, ~~comprising the steps of:~~ wherein said applying step comprises applying the said coating liquid to said one or more discrete application portions of said at least one electrode using a coating apparatus comprising:

_____ a substrate including a coating liquid introduction path connected to a coating liquid supply source, a pressurizing chamber in which ~~the said~~ coating liquid introduction path is opened, and one or more coating liquid discharge paths connected to ~~the said~~ pressurizing chamber and opened to the outside; and

_____ a piezoelectric/electrostrictive operation portion disposed in a position ~~opposite to the opposing said~~ pressurizing chamber;

_____ wherein said coating liquid introduced into said pressurizing chamber is discharged in an atomized droplet state in accordance with a flexural displacement of the said piezoelectric/electrostrictive operation portion; ~~the coating liquid introduced into the pressurizing chamber is discharged in an atomized droplet state.~~

4. (Currently Amended) The method of manufacturing method of the piezoelectric/-electrostrictive film type device according to claim 2, ~~comprising~~ wherein said applying step comprises the steps of: applying the said coating liquid to said one or more discrete application portions of said at least one electrode in an amount which differs with a position to be applied ~~different amounts at different ones of a plurality of said discrete application portions using any one of (1) a coating apparatus comprising a discharge head including a plurality of coating liquid discharge paths having different nozzle sizes, and (2) a coating apparatus comprising a plurality of discharge heads different from one another in the nozzle size of the coating liquid discharge path.~~

5. (Currently Amended) The method of manufacturing method of the piezoelectric/-electrostrictive film type device according to claim 3, ~~comprising the steps of: wherein said applying step comprises~~ applying the said coating liquid to said one or more discrete application portions of said at least one electrode in an amount which differs with a position to be applied ~~different amounts at different ones of a plurality of said discrete application portions using a coating apparatus comprising a plurality of coating liquid discharge paths having different nozzle sizes.~~

6. (Currently Amended) The method of manufacturing method of the piezoelectric/electrostrictive film type device according to claim 1, ~~comprising the~~ steps of: applying the coating liquid while wherein said applying step comprises vibrating at least ~~the one of said substrate or the~~ and said piezoelectric/electrostrictive layer during said applying step.

7. (Currently Amended) The method of manufacturing method of a the piezoelectric/electrostrictive film type device according to claim 1, wherein ~~the said~~ piezoelectric/electrostrictive operation portion ~~is~~ comprises a multilayered structure including a plurality of said piezoelectric/electrostrictive layers and said electrodes alternately stacked on said ceramic substrate.

8. (Currently Amended) The method of manufacturing method of the piezoelectric/electrostrictive film type device according to claim 7, ~~comprising the~~ steps of: wherein said applying step comprises applying the said coating liquid to said one or more discrete application portions of said at least one electrode using a coating apparatus comprising:

_____ pressurizing supply means for pressurizing/supplying the said coating liquid;

_____ switching means which is disposed in a supply path of the said pressurizing supply means to switch the a supply of the said coating liquid; and

_____ a discharge head for discharging the said coating liquid introduced from the supply path of the pressurizing supply means to the outside, the said discharge head comprising:

_____ a discharge head substrate including a coating liquid introduction path connected to the said supply path of the said pressurizing supply means,

_____ a pressurizing chamber in which the said coating liquid introduction path opens, and

_____ one or more coating liquid discharge paths connected to the said pressurizing chamber and opened to the outside; and
_____ a piezoelectric/electrostrictive operation portion disposed in a position ~~opposite to the~~ opposing said pressurizing chamber on the said discharge head substrate; and
_____ wherein ~~at an open time of the switching means, the~~ said coating liquid introduced into the said pressurizing chamber is continuously discharged in an atomized droplet state by a flexural displacement of the said piezoelectric/electrostrictive operation portion when said switching means is open.

9. (Currently Amended) The method of manufacturing method of the piezoelectric/electrostrictive film type device according to claim 7, ~~comprising~~ wherein said applying step comprises the steps of: applying the said coating liquid to said one or more discrete application portions of said at least one electrode using a coating apparatus comprising:

_____ a substrate including a coating liquid introduction path connected to a coating liquid supply source, a pressurizing chamber in which ~~the said~~ said coating liquid introduction path is opened, and one or more coating liquid discharge paths connected to the said pressurizing chamber and opened to the outside; and

_____ a piezoelectric/electrostrictive operation portion disposed in a position ~~opposite to the~~ opposing said pressurizing chamber; and

_____ wherein ~~in accordance with flexural displacement of the piezoelectric/electrostrictive operation portion, the~~ said coating liquid introduced into the said pressurizing chamber is discharged in an atomized droplet state in accordance with a flexural displacement of said piezoelectric/electrostrictive operation portion.

10. (Currently Amended) The method of manufacturing method of the piezoelectric/electrostrictive film type device according to claim 8, ~~comprising the steps of: wherein said applying step comprises~~ applying the said coating liquid to said

one or more discrete application portions of said at least one electrode in an amount which differs with a position to be applied different amounts at different ones of a plurality of said discrete application portions using any one of the (1) a coating apparatus comprising a discharge head including a plurality of coating liquid discharge paths having different nozzle sizes, and (2) a coating apparatus comprising a plurality of discharge heads different from one another in the nozzle size of the coating liquid discharge path.

11. (Currently Amended) The method of manufacturing method of the piezoelectric/electrostrictive film type device according to claim 9, comprising the steps of: wherein said applying step comprises applying the said coating liquid to said one or more discrete application portions of said at least one electrode in an amount which differs with a position to be applied different amounts at different ones of a plurality of said discrete application portions using a coating apparatus comprising a plurality of coating liquid discharge paths having different nozzle sizes.

12. (Currently Amended) The method of manufacturing method of the piezoelectric/electrostrictive film type device according to claim 7, comprising the steps of: applying the coating liquid while wherein said applying step comprises vibrating at least the one of said substrate or the and said piezoelectric/electrostrictive layer while said coating liquid is applied.